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Final Copy of Case Study

Status:
Laureate

Year:
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Organization Name:
IDV Solutions

Organization URL:
www.idvsolutions.com

Project Name:
Visual Command Center

Please select the category in which you are submitting your entry:
Safety & Security

Please provide an overview of the nominated project. Describe the problem it was intended to solve, the technology or approach used, how it was innovative and any technical or other challenges that had to be overcome for successful implementation and adoption. (In 300 words or less.)

Corporate security departments and public safety agencies have a primary duty to protect people and property. In most organizations, their duty extends to protecting workers, facilities, and travelers worldwide. To accomplish their mission, organizations employ multiple internal security systems. They also have risk and security data coming in from external sources for threats such as weather, disease, and terrorism. The problem for most organizations is not a lack of data, but rather a way to analyze and make sense of all the threat data flowing into the security team. It is not uncommon for a security operations center to have dozens of systems and screens, but no unified view of all the risks to the organization. The problem is compounded as the size and global footprint of the organization increases. The Visual Command Center software solves this problem by visually integrating the data from all the systems and sources internal and external together to form a complete picture of the sources of risk to the organization a common operating picture. The risk/threat data is overlaid on a global, interactive base map. The organization's facility locations, people, and floor plans are also located on the base map. A security operator quickly can identify the risk, assess the level of threat to facilities or people by interactively drilling down into the data, and then initiate an appropriate response. Previous attempts to solve the problem focused on connecting hardware systems to a console/text-based display. The Visual Command Center solution takes a different approach; security data from disparate systems are integrated through databases (such as SharePoint and Microsoft SQL), Web feeds, and software connections, and then visually displayed in geography (and time) to the security operator. A significant benefit of the Visual Command Center solution is cost of deployment and maintenance.

When was this project implemented or last updated? (Please specify month and year.) Has it incorporated new technologies and/or other innovations since its initial deployment? (In 300 words or less.)

Visual Command Center was last updated in October 2012. Visual Command Center's genesis was the result of collaboration between IDV Solutions' technology partners and customers including Microsoft Corporation, the U.S. Department of Homeland Security, the U.S. Army Corp. of Engineers, and other branches of the government and military using IDV's Visual Fusion data visualization technology. IDV formally launched Visual Command Center, its first industry specific solution, in October 2011. Visual Command Center was the first solution of its kind to add social media visualization. Introduced in the October 2012 update, users of Visual Command Center can search for, monitor, and analyze, and visualize Twitter and Flickr contributions. For example, during Hurricane Sandy, tweets mentioning the storm were plotted in real-time on a map and timeline. During disasters and other emergencies such as the Fukushima earthquake, Washington D.C. earthquake, and Aurora, CO shootings, Twitter users were among the first to report that an event has occurred or is in progress. Visualizing Twitter data for key words relating to violence or natural disasters can provide first responders or security professionals with valuable extra seconds to respond. In October 2012, a new innovation called "MultiSearch" was added to the Visual Command Center solution. The tool enables users to simultaneously search through all their own data, as well as the Internet, for data relevant to their search terms. Users can include logical and arithmetic operators (e.g. +, -, >, =, <, etc. and phrases) to help them find the data they were looking for. The tool directly addressed a challenge of large organizations with very large data sets being able to rapidly drill down and filter out irrelevant data. Visual Command Center visualizes the matches for the search on the interactive map and timeline.

Is implementation of the project complete? If no, please describe the project's phases and which phase the project is now in. (In 300 words or less.)

The Visual Command Center solution implementation is complete in its current form. It will be updated regularly to meet user requirements, to accommodate changes in technology on which the solution depends, and to ensure that the solution remains state-of-the-industry. Visual Command Center is currently in version 2, with a major revision to version 3 expected in late summer.

Please provide at least one example of how the technology project has benefited a specific individual or organization. Feel free to include personal quotes from individuals who have directly benefited from the work. (In 300 words or less.)

Microsoft Corporation used Visual Command Center in its response to the magnitude 8.9 earthquake, tsunami and nuclear disaster in Fukuskima, Japan. Microsoft used Visual Command Center to check the proximity of Microsoft offices to the earthquake and tsunami disaster zones, and to disseminate custom maps/situation updates to management and incident teams. "Visual Command Center helps you literally envision the situation in a complex disaster environment, so you can plan, carry out response, and execute recovery." -- Mike Foynes, Senior Director of Operations, Microsoft Global Security. In early 2011, protesters and government forces clashed in Tunisia, Egypt, and Libya. The resulting civil unrest led to mass arrests, violence, and international involvement. The safety of Microsoft people and property was at high risk. Microsoft used Visual Command Center to help manage the situation. "Visual Command Center from IDV Solutions is essential to maintaining our security mission, from routine day-to-day local operations to crisis management at our facilities worldwide, making a real impact on our ability to keep our people safe. In the Middle East, despite the turmoil, we did not lose any employees." -- Mike Howard, Chief Security Officer, Microsoft Global Security. A public safety visualization project for St. Clair County, Michigan and the Department of Homeland Security was a precursor to the development of the Visual Command Center solution. Local, county, state, federal and Canadian government agencies collaborate to protect critical infrastructure (bridges, hospitals, rail lines and tunnels) in the region surrounding a key U.S.-Canada border crossing. Jeffrey A. Friedland, St. Clair County Emergency Management Director: "We chose Visual Fusion as the platform for Resilient because it lets our many partner agencies share their information in a consolidated view. It provides the kind of current, relevant information that incident commanders and first responders need in an emergency."

Would this project be considered an innovation, a best practice or other notable advancement that could be adopted by or tailored for other organizations and uses? If yes, please describe that here. (In 300 words or less.)

The risk and security data visualization capabilities of Visual Command Center are an innovation, a best practice, and a notable advancement that could be adopted by or tailored for other organizations and uses. Visual Command Center was born out of the need for a solution for improved situational awareness through the integration of internal and external risk and security data. Its use has grown from specific regional applications for commercial, military, and government agencies to one that is now in use helping protect facilities and people for global organizations. Visual Command Center could be tailored and extended for a variety of related missions: Incident and event management (used for the 2013 Presidential Inauguration); Global supply chain visualization and protection; Campus security; Humanitarian relief - natural disaster planning and response; Homeland security; Critical infrastructure operations and protection; Border and major city protection; Remote monitoring of high-value, in-transit goods; VIP and traveler location and status monitoring; Retail security operations. Organizations using Visual Command Center tend to bring together various functional units security, supply chain and logistics, human resources, operations, and business continuity to share in its benefits. In the case of the Resilient implementation (Section 10), the solution enables collaboration and unified situational awareness between local, state, and federal agencies. The map-based view is intuitive and helps internal and external groups to better collaborate and share data, both across functions/organizations, and vertically to different management levels. The Visual Command Center approach to risk awareness and response allows comprehensive data visualization / integration, precise data extraction, and dissemination to live side-by-side in the same user interface. This empowers organizational units to fine tune usage to their needs, employing the content and features relevant to them in one particular instance, and filtering out the noise of everything else.

If there are any other details that the judges should know about this project, please note them here. (In 300 words or less.)

Visual Fusion, the technology platform underpinning the Visual Command Center solution, was awarded SAFETY Act designation by the U.S. Department of Homeland Security (DHS) in November, 2012. Visual Fusion was the first technology in its class to be designated a "Qualified Anti-Terrorism Technology (QATT)." As part of the Visual Command Center solution, organizations receive a package of data feeds that are pre-configured and can be used to alert customer organizations to global and local risks and threats to people and facilities. The data set eliminates the burden of organizations having to locate and subscribe to these risks sources themselves. The feeds include hurricanes (current location, forecast path, and projected impact plume), natural disasters (volcanoes, earthquakes, wildfires, floods), weather, terrorism, civil unrest, current events, disease (epidemics, outbreaks, rare diseases), HAZMAT, and traffic conditions (live traffic and cameras). In addition to greater collaboration/coordination and overall improved situational awareness, user organization-reported benefits of the Visual Command Center solution include: mitigation of risk to people and assets; faster, more informed crisis response and recovery; increased intelligence-gathering capabilities; increased compliance with internal and regulatory mandates; operational efficiency; and reduced IT / capital expenditures compared with previous technologies. Visual Command Center is being used or adopted across a numerous segments in the private and public sector. The private sector verticals include High Tech, Retail, Pharmaceutical, Oil & Gas, Manufacturing, Web Technology, Telecommunications, Automotive, and Professional Services. On the public sector side, implementations exist in state and local government, federal defense, federal civilian, and humanitarian organizations. Visual Command Center is proving itself to be a valuable innovation to all organizations, no matter the focus or mission of the organization. Appendix 1 Twitter visualization of landfalling Hurricane Isaac Appendix 2 Microsoft deployment visualizing global facilities Appendix 3 August 29, 2012 risk/threat visualization.